OWNER'S GUIDE

AMERICAN MADE AMERICAN OWNED

OUTDOOR POWER EQUIPMENT

MTD YARD MACHINES

Important: Read Safety Rules and Instructions Carefully

REAR TINE TILLER (With Reverse Drive)

Model 406

WARNING: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368022, Cleveland, Ohio 44136-9722.

MTD PRODUCTS INC • P.O. BOX 368022 • CLEVELAND, OHIO 44136-9722

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IMPORTANT

RULES FOR SAFE OPERATION

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR TILLER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL— **HEED ITS WARNING.**

DANGER: **Your tiller was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.**

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Read this owner's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
6. Keep the area of operation clear of all persons, particularly small children and pets.
7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
8. Do not wear loose fitting clothing that could get caught on the tiller.
9. Do not start the engine unless the shift lever is in the neutral (N) position.
10. Do not stand in front of the tiller while starting the engine.
11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.
12. Never attempt to make a wheel or depth bar adjustment while the engine is running.
13. Do not leave the tiller unattended with the engine running.
14. Do not walk in front of the tiller while the engine is running.
15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.
17. Be careful not to touch the muffler after the engine has been running. It is hot.
18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.
20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.
21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.
22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.
23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

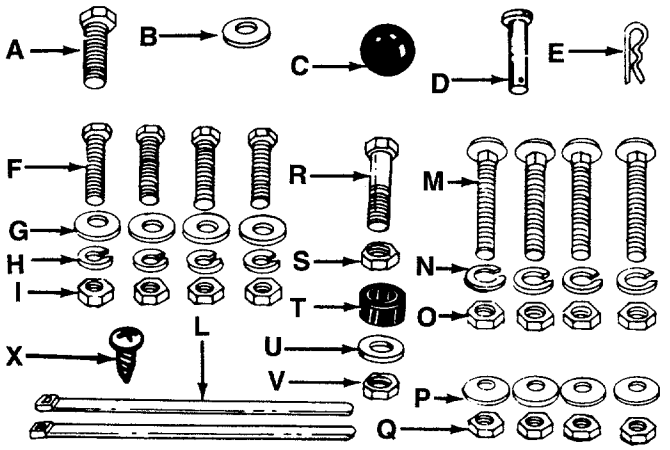


FIGURE 1.

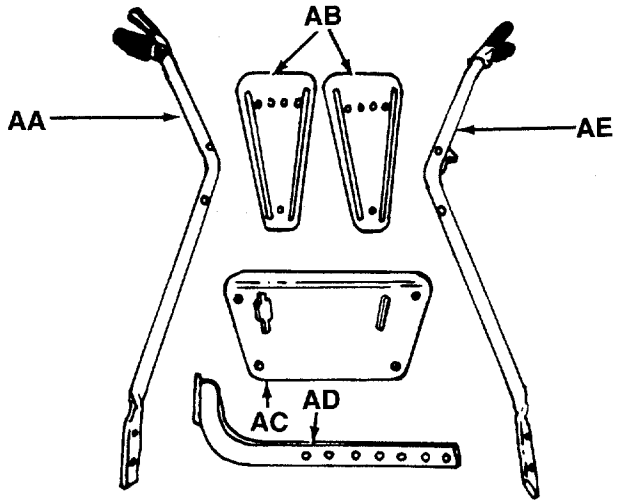


FIGURE 2.

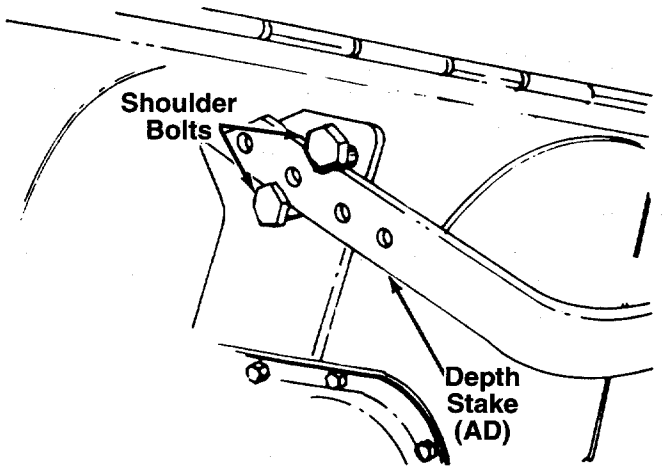


FIGURE 3.

ASSEMBLY INSTRUCTIONS

IMPORTANT: This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

NOTE: *Left and right is determined from the operator's position, standing behind the tiller.*

←Contents of Hardware Pack: (See Figure 1)
(Part numbers are shown in parentheses.)

A (1) Hex Bolt 3/8-16 x 3/4" Long (710-0216)
B (1) Flat Washer 3/8" I.D. (736-0117)
C (1) Ball Knob (720-0165)
D (1) Clevis Pin (711-0415)
E (1) Hairpin Cotter (714-0149B)
F (4) Hex Bolts 3/8-16 x 1.0" Long (710-0253)
G (4) Belleville Washers 3/8" I.D. (736-0105)
H (4) Lock Washers 3/8" I.D. (736-0169)
I (4) Hex Nuts 3/8-16 Thread (712-0798)
L (2) Cable Ties (725-0157)
M (4) Carriage Bolts 5/16-18 x 1.75" Long (710-0458)
N (4) Lock Washers 5/16" I.D. (736-0119)
O (4) Hex Nuts 5/16-18 Thread (712-0267)
P (4) Belleville Washers 5/16" I.D. (736-0242)
Q (4) Hex Nuts 5/16-18 Thread (712-0267)
R (1) Hex Bolt 1/4-28 x .75" Long (710-0412)
S (1) Hex Lock Nut 1/4-28 Thread (712-0117)
T (1) Rubber Washer (735-0126)
U (1) Flat Washer 5/16" I.D. x 7/8" O.D. (736-0159)
V (1) Hex Lock Nut 5/16-18 Thread (712-0158)
W (1) Reverse Drive Clutch Lever (Not Shown—747-0517, Grip—720-0143)
X (1) Self-Tapping Screw (710-0779A)

←Loose Parts in Carton: (See figure 2)
(Part numbers are shown in parentheses.)

AA (1) Handle—R.H. (749-0642A)
AB (2) Side Shields (15390)
AC (1) Handle Panel (784-0271)
AD (1) Depth Stake Assembly (14992)
AE (1) Handle—L.H. (749-0643A)

1. Remove tiller, loose parts and hardware pack from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Extend the control cables attached to the tiller and place on the floor. Be careful not to bend or kink the cables.

DEPTH STAKE INSTALLATION

1. Raise the tine shield hinge flap assembly. Insert the depth stake assembly (AD) between the two shoulder bolts and up through the tine shield ← assembly as shown in figure 3. Depth stake points toward the rear of the unit.

NOTE: *For clarity, figure 3 was taken with tiller raised on end. It is not necessary to raise the tiller.*

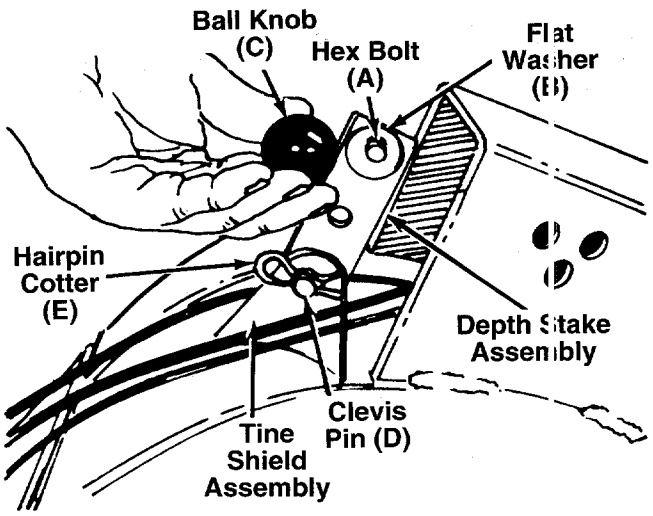


FIGURE 4.

2. Insert clevis pin (D) through the tine shield and depth stake assemblies. Secure with hairpin cotter (E). See figure 4.
3. Insert hex bolt (A) into the upper hole of the depth stake assembly. Place flat washer (B) onto the hex bolt and thread ball knob (C) onto the hex bolt. See figure 4. Tighten securely.

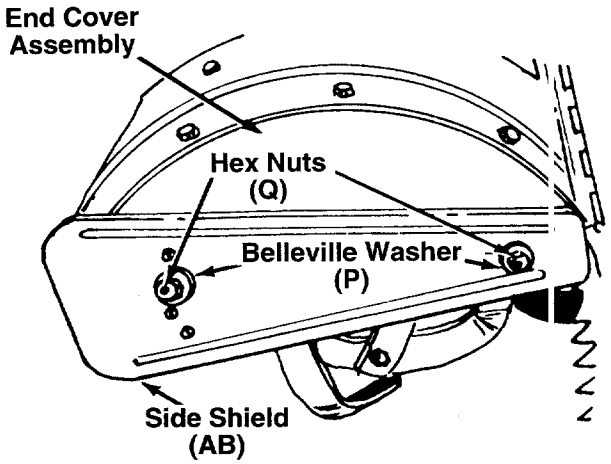


FIGURE 5.

SIDE SHIELD INSTALLATION

Mount side shields (AB) over the weld bolts on the end cover assemblies. Secure with belleville washers (P) and hex nuts (Q). Crowned side of washers go against the hex nuts. See figure 5.

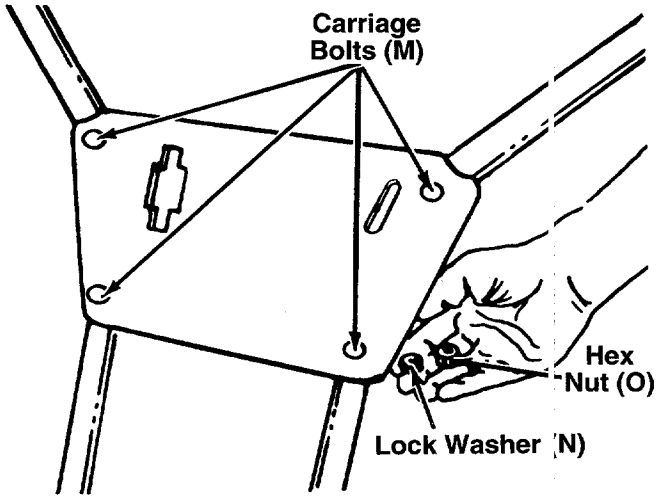


FIGURE 6.

HANDLE ASSEMBLY

1. Attach the handle panel to the handles using carriage bolts (M), lock washers (N) and hex nuts (O). See figure 6. Do not tighten.

NOTE: *To align the holes in the handle panel and the handle, it may be necessary to loosen the cable brackets which are mounted to the back of the handles with self-tapping screws.*

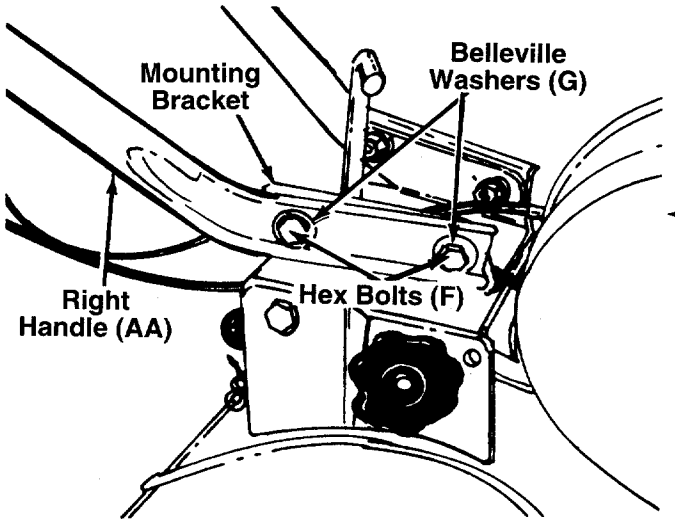


FIGURE 7.

2. Place handle assembly in position on the tiller. Working on one side of the unit, insert one hex bolt (F) through belleville washer (G) (crowned side of washer goes against head of bolt), then through bottom hole of handle and handle mounting bracket. Secure loosely with lock washer (H) and hex nut (I). See figure 7.
3. Align the other side of the handle with the handle mounting bracket. It may be necessary to use force to spring the handle over the handle mounting bracket. Secure loosely with hex bolt, belleville washer, lock washer and hex nut.
4. Secure upper hole in handle to handle mounting bracket (both sides) in the same manner.
5. Tighten securely all four nuts and bolts which secure the handles to the handle mounting brackets. Then tighten the four nuts at the handle panel.

THROTTLE CONTROL INSTALLATION

Assemble the throttle control to the handle panel as follows.

1. Hold the throttle control assembly beneath the handle panel. Turn the control sideways and insert the lever up through the wide portion of the slot on the handle panel. See figure 8A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown in figure 8B to slide it through the slot.

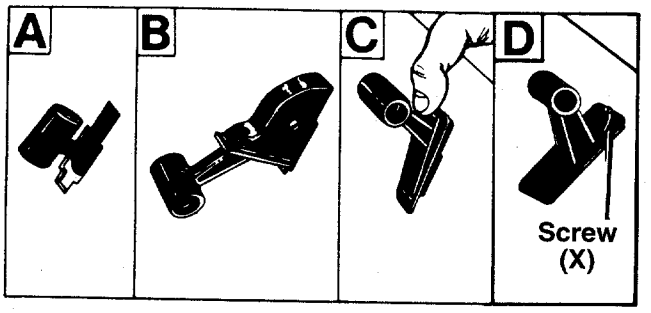


FIGURE 8.

NOTE: *The lever must be all the way to the back of the control housing as shown in figure 8B.*

3. Push the control back into the slot in the handle panel and press in place. Be certain the control is locked securely into the slot.
4. Secure the throttle control to the handle panel using the self-tapping screw (X). See figure 8D.

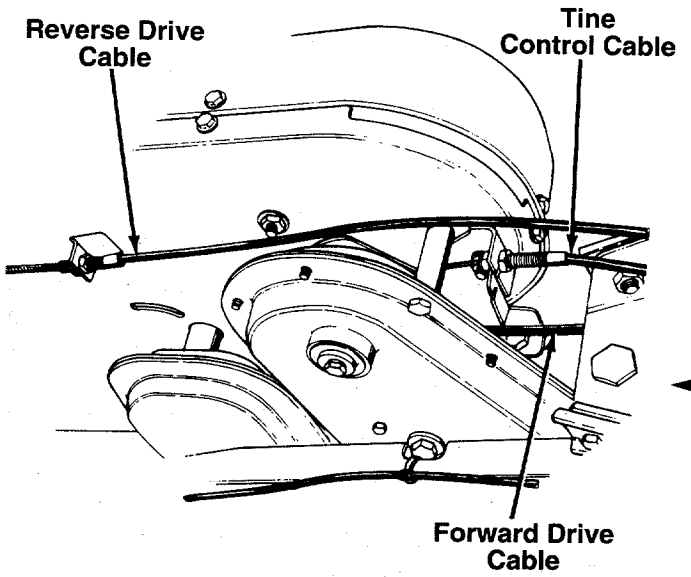


FIGURE 9.

ATTACHING THE CONTROL CABLES

The control cables are already attached to the unit. The tine control cable and the forward drive cable have "Z" fittings on the loose end. Refer to figure 9 for cable identification when attaching the cables.

NOTE: *Both the drive control cables and the tine control cable are attached to springs, which are hooked to bolts. If either the cable or spring has come loose in shipping, it must be reassembled. Refer to page 18, reference numbers 2, 5, 11, 12, 15 and 17.*

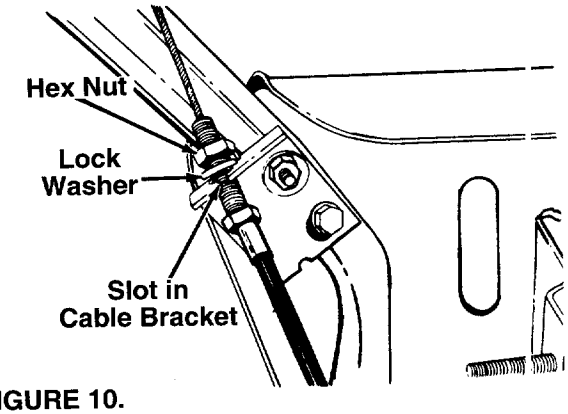


FIGURE 10.

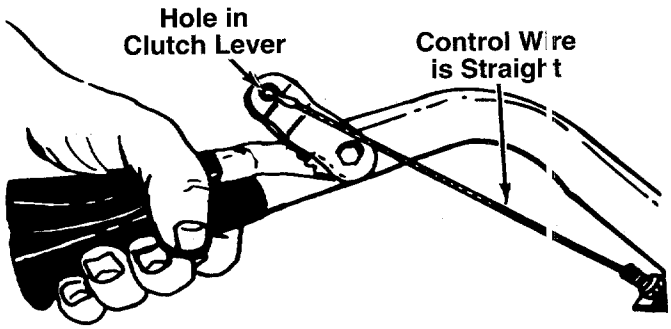


FIGURE 11.

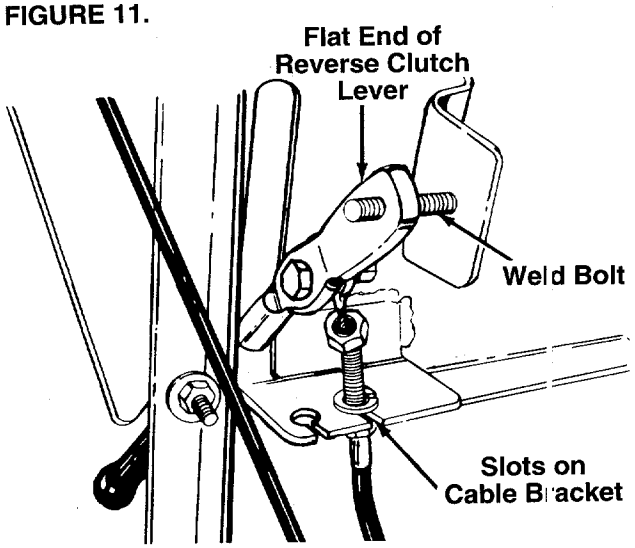


FIGURE 12.

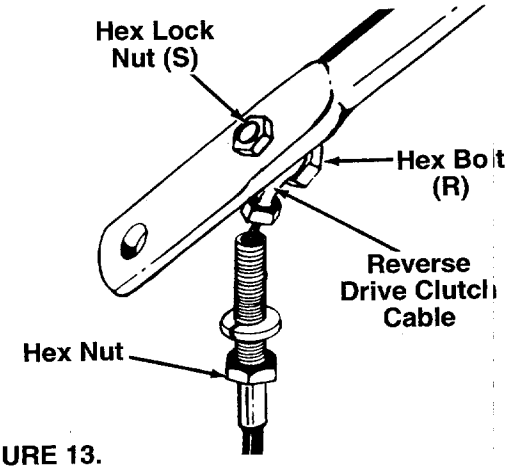


FIGURE 13.

Tine Control Cable (Attaches to Left Handle)

1. Remove one nut and the lock washer from the end of the tine control cable. Slip the cable up through the slot on the cable bracket on the left handle. Rethread hex nut and lock washer on the end of the cable. See figure 10. Do not tighten at this time.
2. Hook the "Z" end of tine control cable into the hole in tine clutch lever.
3. With the clutch lever released (in the "up" position), adjust the bottom nut at the cable bracket so there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket. Squeeze the clutch lever against the handle. The control wire should now be straight. See figure 11.

NOTE: *Do not overtighten control wire. Too much tension may cause it to break.*

Forward Drive Control Cable (Attaches to Right Handle)

Attach the forward drive control cable (refer to figure 9) to the right handle in the same manner in which the tine control cable was attached.

WARNING: Final adjustment of the forward and reverse drive cables must be made as instructed in the Final Adjustment section before operating the tiller.

Reverse Drive Control Cable

1. Push the flat end of reverse drive clutch lever through the slot in the handle panel. See figure 12.
2. Attach the end of drive control cable to the upper hole of reverse drive clutch lever (W), using hex bolt (R) and hex lock nut (S). See figure 13.
3. Remove one nut and the lock washer from the end of the reverse drive control cable. Thread the other hex nut all the way down the cable as far as it will go as shown in figure 13.
4. Slip the wire on the cable through the inside slot in the cable bracket as shown in figure 12. Push the ends of the cable up through the holes in the bracket. Rethread hex nut and lock washer on the end of the cable. Do tighten at this time.
5. Place end of reverse drive clutch lever over weld bolt on handle panel. See figure 12.

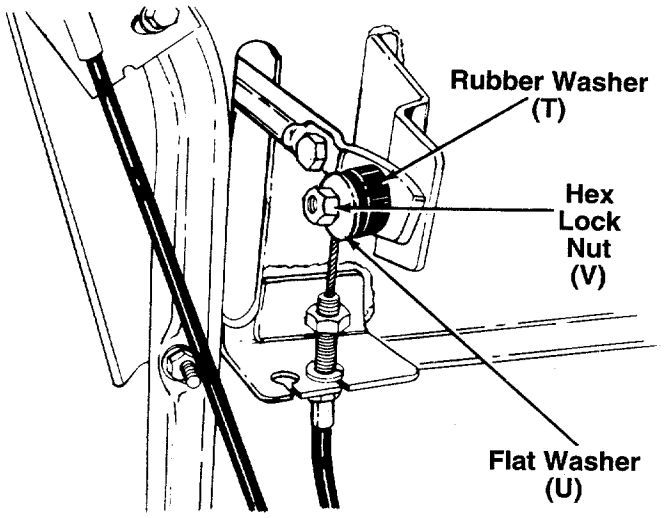


FIGURE 14.

6. Secure reverse drive clutch lever to weld bolt with rubber washer (T), flat washer (U) and hex lock nut (V). See figure 14. Tighten hex lock nut until snug. Do not overtighten.
7. With the reverse drive clutch lever in the neutral (N) position, adjust the reverse cable as follows. Adjust the hex nuts at the cable bracket on the handle panel so that the cable is tight, and the bolt on the reverse idler pulley is in the center of the slot (approximately 1" from either end of the slot) as shown in figure 15.
8. Secure the cables to the right hand handle with two cable ties (L), one near the top and one near the bottom of handle. Trim excess ends of cable ties.
9. Check the adjustment of the drive clutch controls as follows.

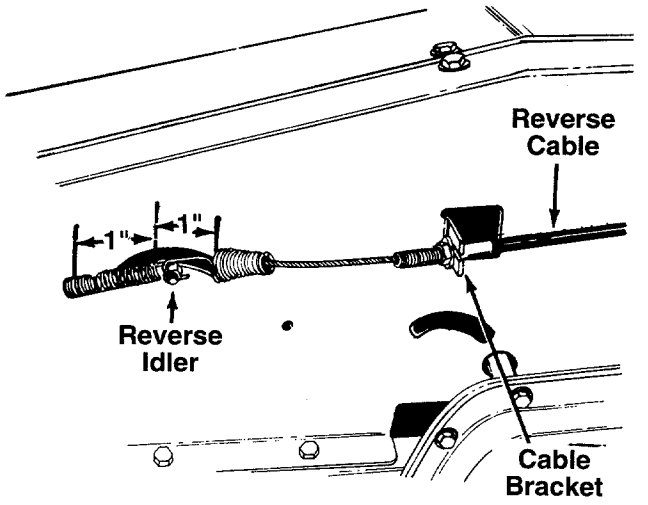


FIGURE 15.

FINAL ADJUSTMENTS

First check the adjustment of the drive clutch controls with the engine off as follows.

1. Disconnect the spark plug wire from the spark plug and ground against the engine.
2. Make certain the forward drive and tine clutch levers are released, and the reverse drive clutch lever is in the neutral (N) position.
3. Pull the recoil starter rope several times. If the unit moves forward, adjust the forward cable as instructed in step A which follows. If the unit moves backward, adjust the reverse cable as instructed in step B which follows.

IMPORTANT: Service engine with oil and gasoline before starting the engine. Refer to the separate engine manual packed with your tiller.

Now check the adjustment of the drive clutch controls with the engine running. Place the unit against a solid object (wall, fence, etc.). With the forward drive clutch lever and tine clutch lever released and the reverse drive clutch lever in the neutral position, carefully start the engine.

WARNING: BE PREPARED TO STOP ENGINE IMMEDIATELY, as tiller may go in reverse motion.

NOTE: *The unit moves faster in reverse than in forward.*

Note which (if any) of the following conditions exist in your unit. Adjust the cable(s) at the cable brackets by following the appropriate instructions.

WARNING: Stop the engine before making any cable adjustments.

A. TILLER HAS FORWARD MOTION with forward drive clutch lever released. Adjust the forward cable (right hand handle) by loosening the hex nut on top of the cable bracket three or four turns, then tightening the hex nut beneath the cable bracket.

B. TILLER HAS REVERSE MOTION with reverse drive clutch lever in neutral. Adjust the reverse cable (beneath the handle panel) by loosening the nut beneath the cable bracket three or four turns, then tightening the hex nut on top of the cable bracket.

C. TILLER DOES NOT HAVE FORWARD MOTION with forward drive clutch lever in forward. Adjust the forward cable by loosening the hex nut beneath the cable bracket three or four turns, then tightening the hex nut on top of the cable bracket.

D. TILLER DOES NOT HAVE REVERSE MOTION with the reverse drive clutch lever in reverse. Adjust the reverse cable by loosening the hex nut on top of the cable bracket three or four turns, then tightening the hex nut beneath the cable bracket.

TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure).

WARNING: Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

CONTROLS

THROTTLE CONTROL

The throttle control lever is located on the right hand side of handle panel and controls the engine speed. See figure 16.

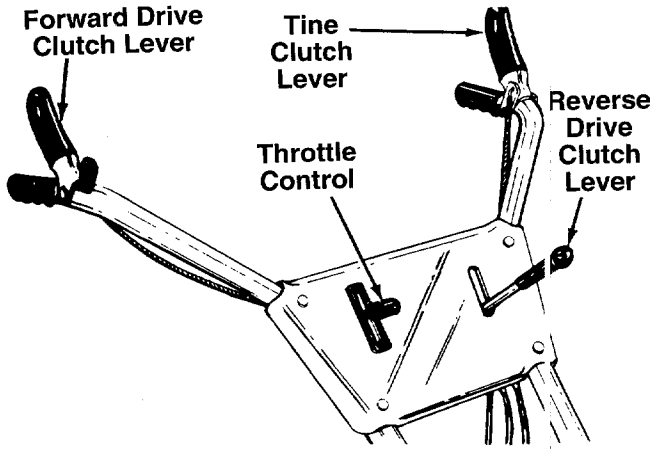


FIGURE 16.

1. Start—Push throttle control lever forward (down) to FAST position.
2. Stop—Pull lever back (upward) to stop the engine.

TINE CLUTCH LEVER

The tine clutch lever is located on the left handle. See figure 16. Squeeze the lever against the handle to engage the tines. Release the lever to stop the tines from turning.

FORWARD DRIVE CLUTCH LEVER

The forward drive clutch lever is located on the left handle. See figure 16. Squeezing the lever against the handle engages the forward wheel drive. Release the lever to stop the forward motion.

REVERSE DRIVE CLUTCH LEVER

The reverse drive clutch lever is located on the left hand side of handle panel. See figure 16.

The reverse drive clutch lever may be placed in one of two positions.

1. Neutral (N)—Be certain lever is in neutral position when starting the engine.
2. Reverse (R)—Raise up on the handles to lift the tines out of the ground and pull the drive clutch lever back (upward) slowly to obtain reverse. Always use caution when using the reverse. When using reverse, if reverse drive clutch lever is released it will snap back into neutral (N).

NOTE: *Never engage both the forward and reverse drive at the same time, or the engine will stall.*

OPERATION

IMPORTANT: Engine is shipped **without** oil.

BEFORE STARTING

1. Before operating tiller for the first time or if tines have been removed and reassembled for any reason, check to be certain the tines are assembled correctly. The sharp edge of the tines must enter the soil first as shown in figure 17. (Figure 17 illustrates the left hand tines, viewed from the left hand side of the tiller. Right hand tines rotate in the same direction as the left hand tines.)

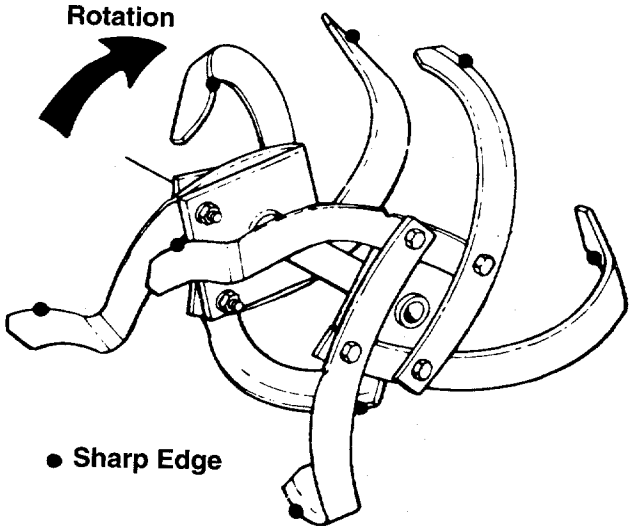


FIGURE 17.

2. **Service engine with oil** as instructed in the separate engine manual packed with your unit.
3. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.

TO START ENGINE

WARNING: BE SURE NO ONE IS STANDING IN FRONT OF THE TILLER WHILE THE ENGINE IS RUNNING OR BEING STARTED.

1. Place the throttle control lever in START position.
2. Move choke lever to CHOKE position.

NOTE: *A warm engine may not require choking.*

3. Stand at side of tiller. Grasp the starter handle and pull out slowly, until it pulls slightly harder. Let rope rewind slowly.
4. Pull starter handle rapidly. Do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
5. Repeat steps 3 and 4 until engine starts.
6. As engine warms up and begins to operate evenly, move choke lever gradually to OFF position. If engine falters, return to choke position, then slowly move to OFF position.

Refer to engine manual for additional engine information.

TO STOP ENGINE

1. Move throttle control to OFF position.
2. Disconnect spark plug wire and ground to prevent accidentally starting while equipment is unattended.

HOW TO USE YOUR TILLER

WARNING: When operating the tiller for the first time, use the depth bar setting that gives 11/2 inches of tilling depth (second hole from the top). Refer to figure 18. Use slow speed only.

Tilling depth is controlled by the depth stake which can be adjusted to five different settings. See figure 18. Adjust the side shields as shown in figure 19, as you adjust the depth stake. Be certain spark plug wire is disconnected and grounded against the engine.

1. When using the tiller for the first time, use the second adjustment hole from the top (1-1/2" of tilling depth). See figure 18.

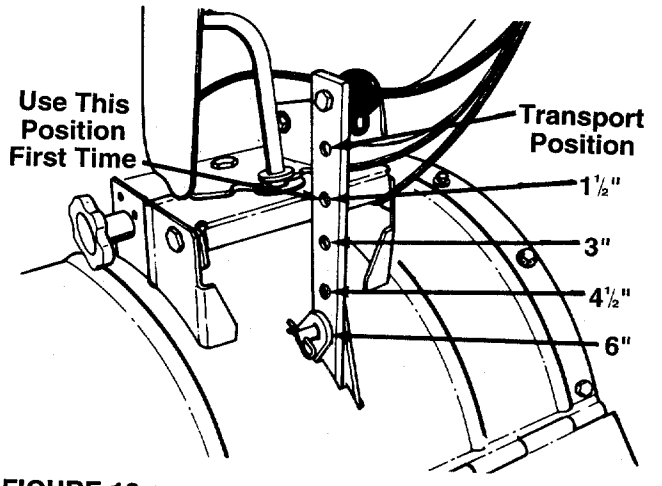


FIGURE 18.

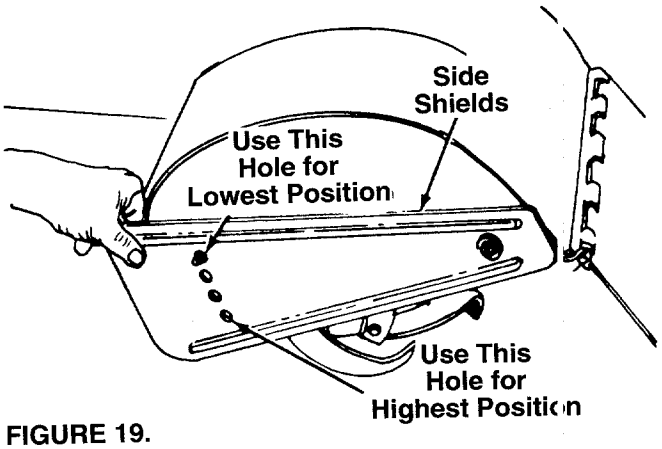


FIGURE 19.

2. When breaking up sod and for shallow cultivation, use the setting which gives 11/2" of tilling depth (second hole from the top). Place the side shields in their lowest position. For further depth, raise the depth stake and side shields and make one or two more passes over the area.
3. When tilling loose soil, depth stake may be raised to its highest position (use bottom adjustment hole) to give the deepest tilling depth. Raise the side shields to their highest position.
4. To transport tiller, lower the depth stake (use top adjustment hole).

To adjust the depth stake, remove the clevis pin and hairpin cotter. See figure 18. Move the depth stake to the desired setting.

To adjust the side shields, remove the hex nut and belleville washer from the front and loosen the rear nut. See figure 19. Pivot the side shield to the desired position. Replace hex nut and belleville washer. Tighten securely.

To operate the tiller:

1. Select the depth stake setting.
2. Start engine as instructed on page 9.
3. Engage either the forward drive clutch lever or the reverse drive clutch lever.
4. Engage tine clutch lever.

WARNING: Engage wheel drive before engaging the tine clutch lever.

NOTE: *To transport tiller, do not engage the tine clutch lever. Engage the wheel drive only.*

WARNING: Do not push down on the handles so that the wheels are lifted off the ground while the tine clutch is engaged, or the tiller could move backward and cause personal injury.

For best results, it is recommended the garden be tilled twice (lengthwise, then widthwise) to pulverize the soil.

ADJUSTMENTS

WARNING: Disconnect the spark plug wire and ground against the engine before performing any adjustments, repairs, or maintenance.

HANDLE ADJUSTMENT

The handle may be placed in one of nine different positions. The handle may be adjusted to one of three height positions, and also may be adjusted to be in line with the tiller, or swung to the left or right so the operator is not walking in the freshly tilled soil.

To adjust the handle height, remove the hand knob and locking pin shown in figure 20. Select one of the three adjustment holes and reassemble.

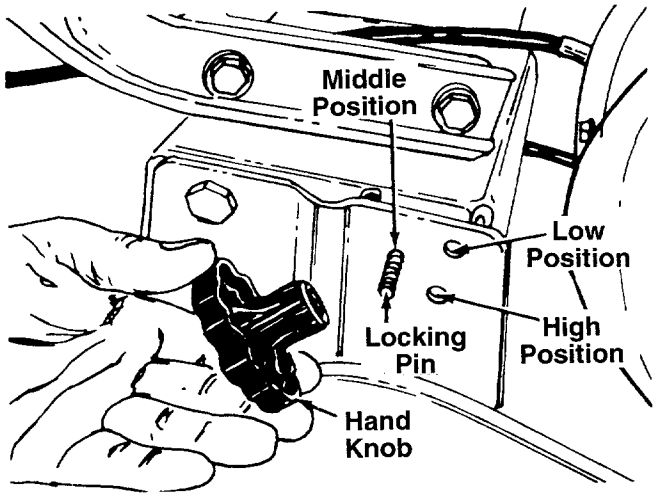


FIGURE 20.

To adjust the handle position from side to side, loosen the adjustment handle by turning it counterclockwise several turns. Pull the adjustment handle backward and pivot the tiller handle to desired position. Release and tighten the adjustment handle. See figure 21.

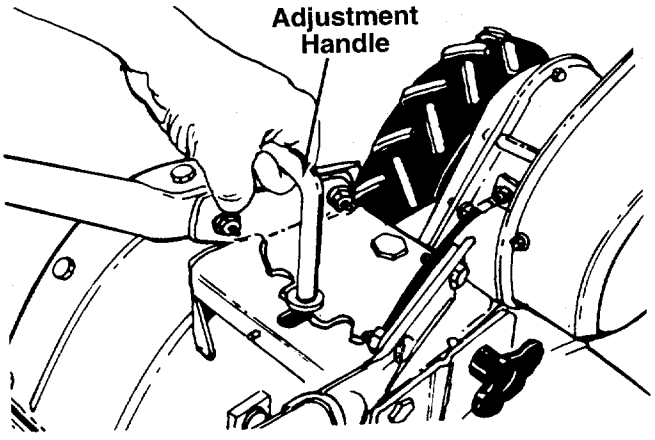


FIGURE 21.

DEPTH STAKE ADJUSTMENT

To adjust the depth stake, refer to "How To Use Your Tiller" on pages 9 and 10.

BELT TENSION ADJUSTMENT

Tine Clutch

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. Adjustment is needed if the tines seem to hesitate while tilling, but the engine maintains the same speed. To adjust, loosen the hex nuts at the cable bracket on the handle. See figure 22. With the clutch lever released as shown in figure 16, adjust the bottom nut so that there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket.

NOTE: *Do not overtighten control wire. Too much tension may cause it to break.*

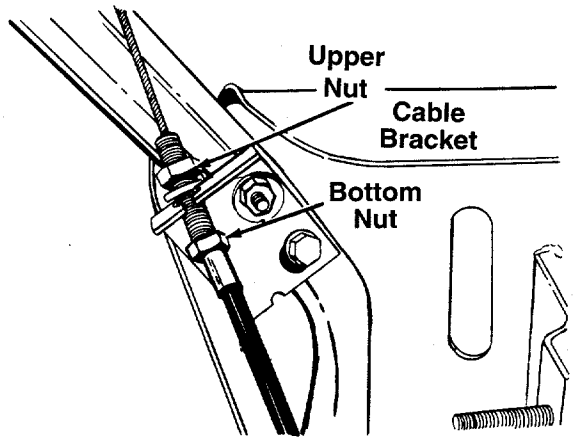


FIGURE 22.

Drive Clutch

If adjustment is needed, refer to final adjustment section of Assembly Instructions.

If through normal operation the belts become stretched or worn, and there is no adjustment left at the cable brackets on the handles and handle panel, the other end of the cables may be adjusted as follows.

a. If the tiller does not have forward motion with the forward drive clutch lever engaged, adjust the forward drive cable by loosening the hex nut in back of the cable bracket on the tiller a few turns, then tightening the hex nut in front of the bracket. Refer to figure 9.

b. If the tiller does not have reverse motion with the reverse drive clutch lever in reverse, adjust the reverse cable by loosening the hex nut in front of the cable bracket on the tiller a few turns, then tightening the hex nut in back of the bracket. When correctly adjusted, the reverse idler should be toward the middle of the slot as shown in figure 15.

When making either of the above adjustments (a or b), be certain to recheck the neutral adjustments on the tiller (steps A and B in first column on page 8).

CARBURETOR ADJUSTMENT

WARNING: If any adjustments are made to the engine while the engine is running, (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If adjustments are needed, refer to the engine manual packed with the tiller.

NOTE: *A dirty air cleaner will cause engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor. Do not make unnecessary adjustments. Factory settings are satisfactory for most applications and conditions.*

THROTTLE CONTROL ADJUSTMENT

To obtain satisfactory engine performance, the engine throttle control must be adjusted properly. If it is necessary to check the engine control adjustments, proceed as follows.

1. Loosen the cable clamp screw. See figure 23.
2. With the throttle control in FAST position and the cable connected to the adapter lever, push the cable through the cable clamp in the direction shown in figure 23 until the adapter lever is as far up as it will go.
3. Tighten the cable clamp screw.
4. Check that the engine stops when throttle control is moved to STOP position. If engine does not stop, loosen the cable clamp screw and readjust by pulling cable backward slightly until engine stops. Retighten cable clamp screw.

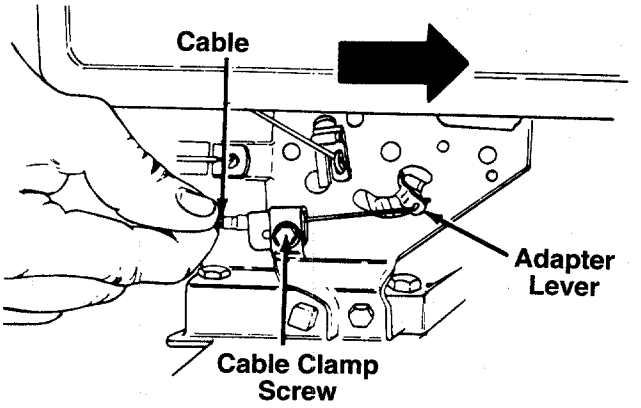


FIGURE 23.

LUBRICATION

WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on tiller.

Chain Cases—The chain cases are pre-lubricated and sealed at the factory. They require no checking unless the chain cases are disassembled. To fill with grease, lay the left half of the chain case on its side. Add 12 ounces of plastilube #0 grease to the tine chain case or 10 ounces to the wheel chain case. Assemble the right half to it. This grease can be obtained through your nearest authorized dealer. Order part number 737-0133 (14 oz. tube).

Wheels—Lubricate the wheel bearings with a light oil after each fifteen hours of operation.

Clutch Controls—Lubricate the pivot points on the clutch levers and the cables at least once a season with light oil. The controls must operate freely in both directions.

Pivot Points—Lubricate all pivot points and linkages at least once a season with light oil.

MAINTENANCE

WARNING: Disconnect the spark plug wire and ground it against the engine before performing any repairs or maintenance.

IMPORTANT: If for any reason the tines are removed from the tiller, be certain the tines are reassembled so that the sharp edge of the tines enter the soil first. Refer to item number one under "Operation."

TROUBLE SHOOTING

Refer to page 15 of this manual for trouble shooting information.

ENGINE

Refer to the separate engine manual for all engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaners should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each tilling season; check engine manual for correct plug type and gap specifications.

CLEANING THE TINE AREA

Clean the underside of the tine shield after each use. The dirt washes off the tines easier if washed immediately instead of after it dries.

TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

When installing a tire to the rim, be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.

WARNING: Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

BELT REPLACEMENT

Your tiller has been engineered with belts made of special material (Kevlar Tensile) for longer life and better performance. They should not be replaced with an off-the-shelf belt.

If belt replacement is required, order belt or belts by part number from your nearest authorized dealer.

1. Remove belt cover by removing the four self-tapping screws. See figure 24.

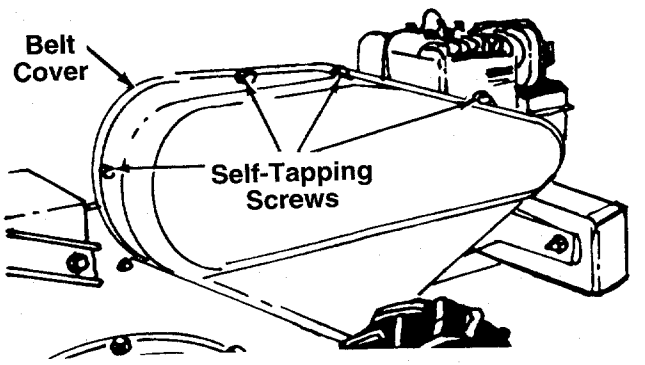


FIGURE 24.

2. To remove the tine belt, lift up on the idler pulley, and slip belt off tine chain case pulley as shown in figure 25. Remove belt from the two-step engine pulley.

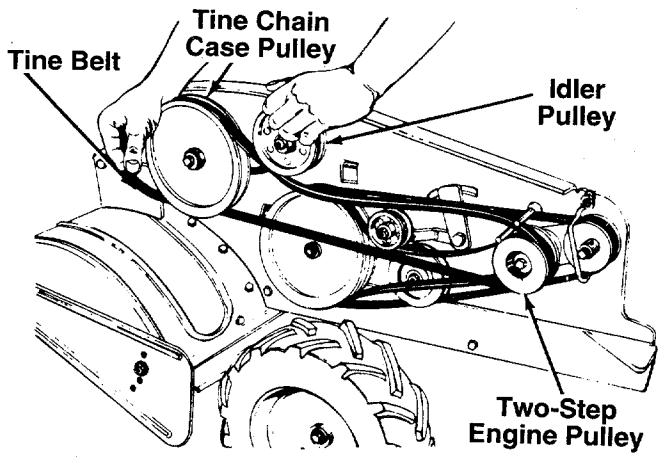


FIGURE 25.

3. To remove the reverse drive belt, lift up on small idler pulley as shown in figure 26. Slip belt off outside sheave of wheel chain case pulley. Then remove belt from two-step engine pulley.

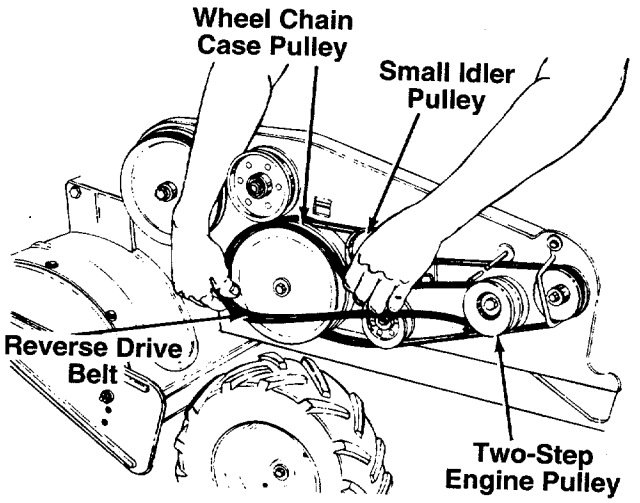


FIGURE 26.

4. To remove the forward drive belt, proceed as follows.

   A. Loosen (do not remove) the hex nut at the top of the wire belt keeper.

   B. Pull bottom of wire belt keeper out and then upward, pivoting it away from the forward engine pulley. See figure 27.

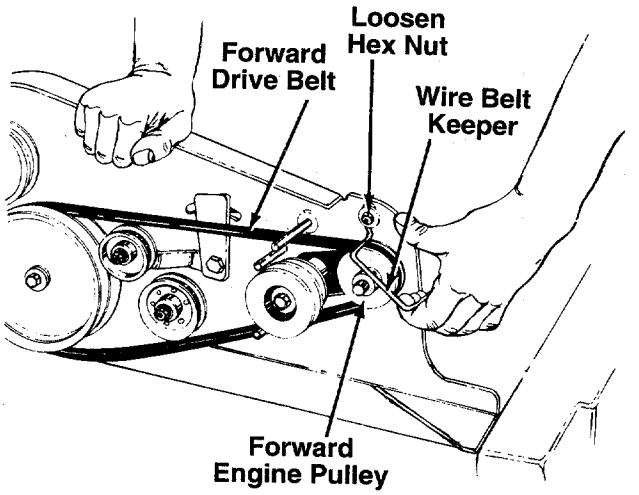


FIGURE 27.

   C. Lift belt off the forward engine pulley. See figure 28.

   D. Remove belt from inside sheave of wheel chain case pulley.

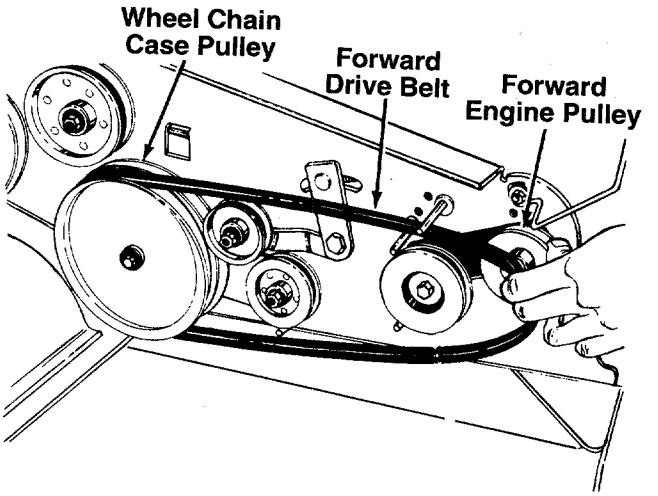


FIGURE 28.

5. Reassemble new belts, following instructions in reverse order.

IMPORTANT: When reassembling belts, be certain belts are routed around all belt keeper pins as shown in figure 29.

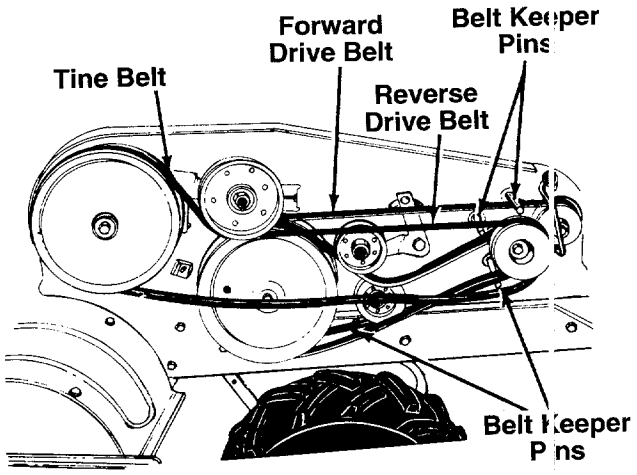


FIGURE 29.

NOTE: If the "V"-idler or flat idler pulleys are removed for any reason, be sure to install with hub side against the idler bracket. See figure 30.

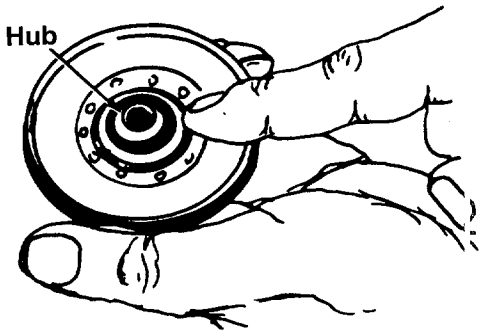


FIGURE 30.

OFF-SEASON STORAGE

If the tiller is to be inoperative for a period longer than 30 days, the following precautions are recommended.

1. Working outdoors, drain all fuel from the fuel tank. Run the engine until it stops from lack of fuel.

WARNING: DO NOT DRAIN FUEL WHILE SMOKING, OR IF NEAR AN OPEN FIRE.

2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with fresh oil.
3. Protect the inside of the engine for storage as instructed in the separate engine manual packed with your unit.
4. Clean the exterior of engine and the entire tiller thoroughly.
5. Wipe tines with oiled rag to prevent rust.

NOTE: *When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any springs, bearings and cables.*

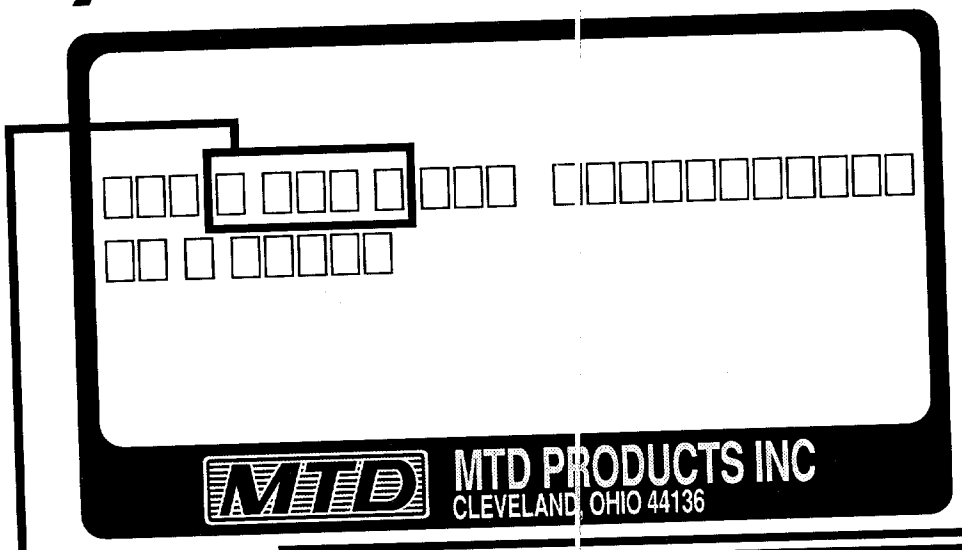
6. Store in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	1. Fuel tank empty, or stale fuel. 2. Throttle control lever not in starting position. 3. Spark plug wire disconnected. 4. Faulty spark plug. 5. Engine flooded.	1. Fill tank with clean, fresh gasoline. 2. Move throttle lever to START position. 3. Connect wire to spark plug. 4. Clean, adjust gap or replace. 5. Remove spark plug, dry the plug, and crank engine with plug removed and throttle in OFF position. Replace spark plug, connect wire and resume starting procedures.
Engine runs erratic	1. Unit running on CHOKE. 2. Spark plug wire loose. 3. Stale fuel. 4. Vent in gas cap plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment.	1. Move choke lever to OFF position. 2. Connect and tighten spark plug wire. 3. Fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean air cleaner as instructed in separate engine manual. 7. Adjust carburetor as instructed in separate engine manual.
Engine overheats	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean as instructed in separate engine manual. 3. Adjust carburetor as instructed in separate engine manual.
Tines do not engage	1. Foreign object lodged in tines. 2. Tine clevis pin(s) missing. 3. Control cable not adjusted properly. 4. Belt worn and/or stretched.	1. Dislodge foreign object. 2. Replace tine clevis pin(s). 3. Adjust control cable (see assembly instructions). 4. Replace belt.
Wheels do not engage	1. Control cable not adjusted properly. 2. Belt worn and/or stretched.	1. Adjust control cable (see assembly instructions). 2. Replace belt.

NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

Copy the information from your model plate here:



Please help us help you!

Have your model number available when you call

Model No.	-406-
Engine Oil (SAE 30)	737-0208 (21 oz. req'd.)
Air Filter	491588
Air Pre-Cleaner	491435
Spark Plug	RJ19LM
Throttle Cable	746-0502
Forward Drive Clutch Cable	746-0496
Reverse Drive Clutch Cable	746-0571
Tine Clutch Cable	746-0535
Forward Drive Belt	754-0190
Reverse Drive Belt	754-0109
Tine Drive Belt	754-0195A
Forward Drive Idler Pulley	756-0313
Reverse Drive Idler Pulley	756-0166
Tine Drive Idler Pulley	756-0405
Wheel Chain Case Grease (10 oz. req'd.)	737-0223 (16 oz. bottle)
Tine Chain Case Grease (12 oz. req'd.)	737-0223 (16 oz. bottle)

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